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DOCUMENT-IDENTIFIER: US 5786395 A

TITLE: Absorbent foams made from high internal phase emulsions useful for acquiring and distributing aqueous fluids

## DEPR:

The polymer forming the HIPE foam structure will preferably be substantially free of polar functional groups. This means the polymeric foam will be relatively hydrophobic in character. These hydrophobic foams can find utility where the absorption of hydrophobic fluids is desired. Uses of this sort include those where an oily component is mixed with water and it is desired to separate and isolate the oily component, such as in the case of marine oil spills.

## DEPR:

Treatment of these relatively hydrophobic foams with hydrophilizing surfactants (with or without hydratable salts) will typically be carried out to the extent necessary to impart suitable hydrophilicity to the foam. Some foams of the preferred HIPE type, however, are suitably hydrophilic as prepared, and can have incorporated therein sufficient amounts of hydratable salts, thus requiring no additional treatment with hydrophilizing surfactants or hydratable salts. In particular, such preferred HIPE foams include those where certain oil phase emulsifiers previously described and calcium chloride are used in the HIPE. In those instances, the internal polymerized foam surfaces will be suitably hydrophilic, and will include residual water-phase liquid containing or depositing sufficient amounts of calcium chloride, even after the polymeric foams have been dewatered to a practicable extent.

## DEPR:

Polymeric foams according to the present invention are broadly useful in absorbent cores of disposable diapers, as well as other absorbent articles. These foams can also be employed as environmental waste oil sorbents; as absorbent components in bandages or dressings; to apply paint to various surfaces; in dust mop heads; in wet mop heads; in dispensers of fluids; in packaging; in shoes as odor/moisture sorbents; in cushions; in gloves, and for many other uses.

## DEPR:

For purposes of determining such acquisition/distribution foam layer positioning, the length of the absorbent article will be taken as the normal longest longitudinal dimension of the elongated article backing sheet. This normal longest dimension of the elongated backing sheet can be defined with respect to the article as it is applied to the wearer. When worn, the opposing ends of the back sheet are fastened together so that these joined ends form a circle around the wearer's waist. The normal length of the backing sheet will thus be the length of the line running through the back sheet from a) the point on the edge of the back sheet at the middle of the wearer's back waist, through the crotch, to b) the point on the opposite edge of the backing sheet at the middle of the wearer's front waist. The size and shape of the topsheet will generally correspond substantially to the back sheet.